

Polar Bear Research

in the Northwest Territories

Rec'd: SEP 27 1979
Order No.:
Price: ?
Acc. No:

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General Information

Canada's northland has always been home to most of the world's polar bears. Perhaps 12,000 to 15,000 live in Canada.

Over the years, polar bear populations have declined. Early explorers with firearms, whalers and sealers wishing to earn extra money from polar bear pelts, an increase in the price of a pelt, all contributed to the decline.

Also, modern machines like snowmobiles, high powered rifles and aircraft made hunting easier than in the old days.

In 1965 scientists from around the world met to discuss the declining polar bear populations.

Why must polar bears be protected from overhunting?

Polar bears have one of the lowest birth rates of the Arctic animals.

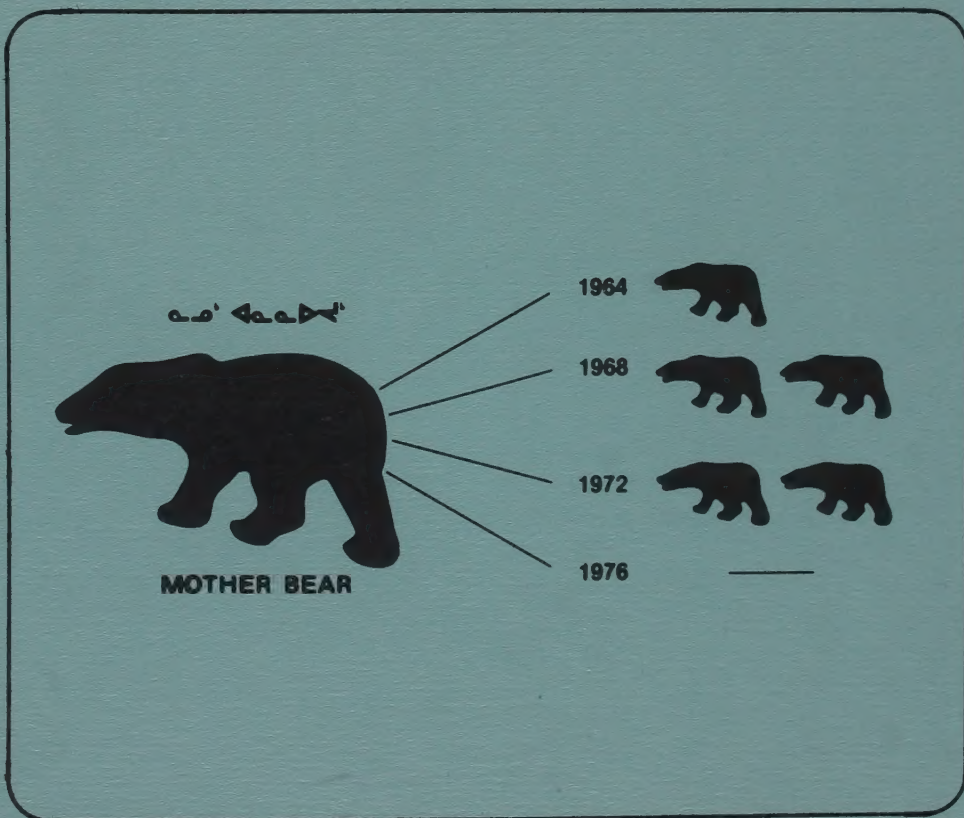
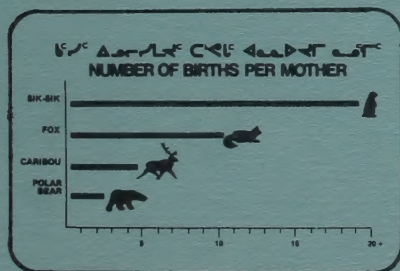
A female bear will not have cubs until she is at least four years old, and will have only about two cubs every three or four years. In her lifetime she may have only four to eight cubs.

Some countries completely banned polar bear hunting at that time.

Canada was under pressure to stop polar bear hunting also, so in 1967 we started a research program to find out how many bears could be killed without causing the population to decline.

The NWT Fish and Wildlife Service is working with the Canadian Wildlife Service and the provinces of Ontario, Quebec and Manitoba to obtain the following information about polar bears:

1. How many bears there are in Canada
2. How many cubs are born each year
3. How many cubs grow large enough to be hunted
4. How many grow old enough to have cubs
5. How many cubs a female bear is likely to produce in a normal lifetime



How many bears can be killed in the NWT?

In Canada, more bears are killed than in all other countries of the world combined. This year 625 polar bears may be killed legally in northern Canada, with NWT hunters allowed 530.

Each community has a quota on the number of bears its hunters may kill. The number was established by taking a three year average of the number of bears killed in each settlement when hunters used dog teams.

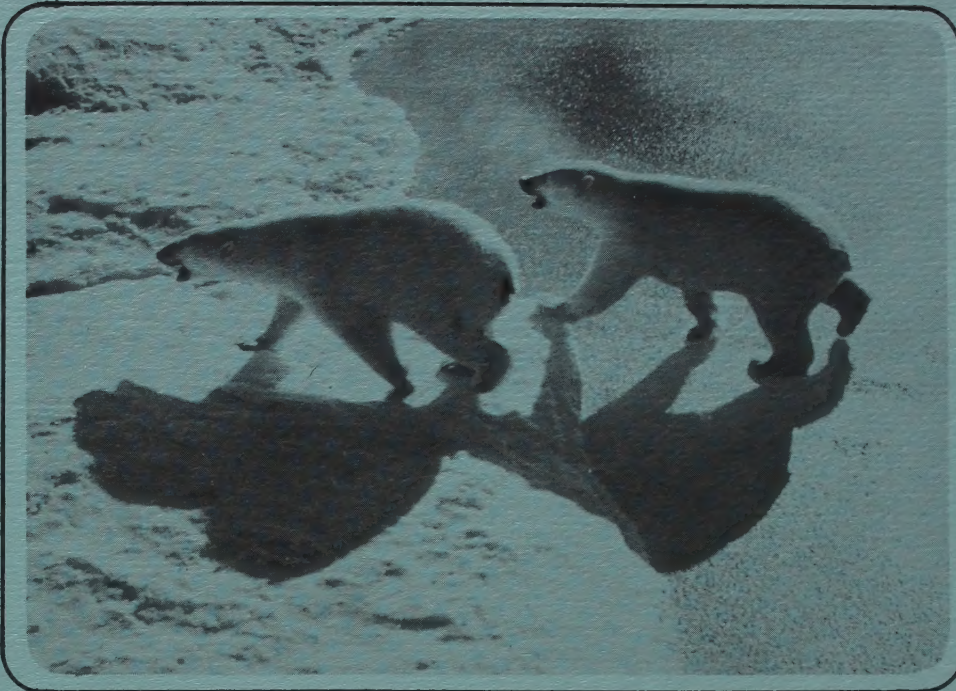
Where people had traditionally killed many bears, the quota was higher than in other areas where fewer bears were killed.

Who can hunt polar bears?

In the NWT only general hunting licence holders in Inuit communities can get a tag to hunt polar bears. These tags are distributed by the Hunters' and Trappers' Association in each community.

However, the Inuit can allow sports hunters to hunt bears on their quota. For this privilege, a sports hunter must hire an Inuk guide and pay a fee of thousands of dollars ... money which is an important source of cash in northern communities.

Whether a polar bear is killed by a sports hunter or an Inuk, it comes off the community's quota.



Much of the research work done on polar bears relates to quotas. The biologist must know

where the populations are, and how large the populations are in order to change quotas.

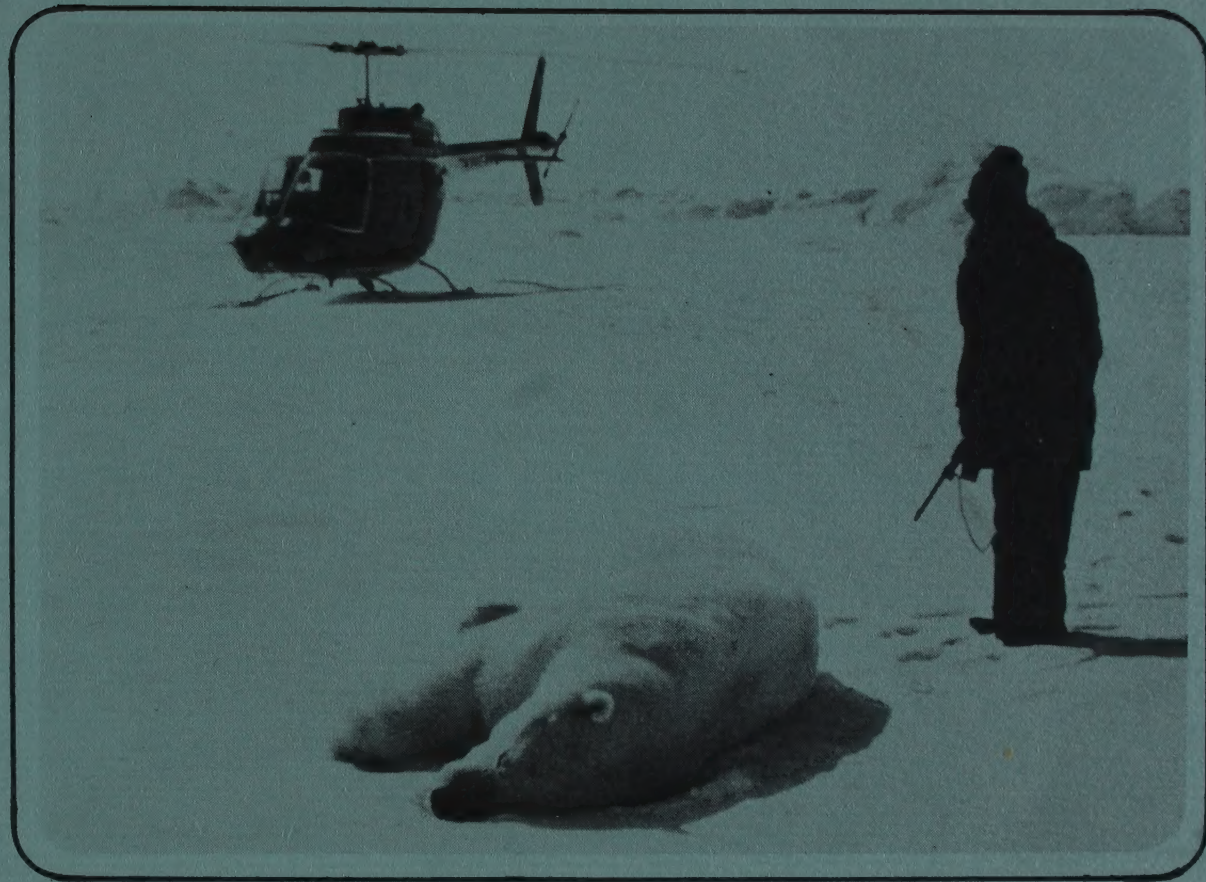


Does drugging and capturing harm the bear?

To learn more about polar bears, biologists must capture some bears.

The biologist uses a helicopter to find the bears, then using a gun, shoots the bear with a needle, like the ones used at the nursing station.

The drug he uses is much like the one used on people before an operation. Under normal circumstances it does not affect the meat or harm the bear. Many bears which have been tranquilized and later shot are the biggest and fattest bears. These bears have been eaten with no harm to the people.



The drug takes about 15 minutes to have effect. The bears are usually drugged from one to two

hours, but sometimes it may take all day to recover.

What does the biologist do to a drugged bear?

Once a biologist immobilizes a bear, he does several things.

First he measures the bear's chest. This tells him the weight of the animal.

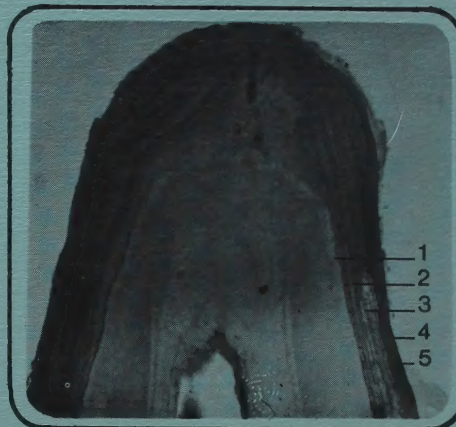
Then he puts a tag on one ear. The number on the tag is also tattooed inside the bear's upper lip.

Later, if hunters shoot a bear with a tag they are asked to return the tag to a Fish and Wildlife officer. If there is no tag they should check the upper lip for a tattoo, and if there is one, slice it off, dry it and give it to the Fish and Wildlife officer.



After tagging and tattooing the bear, the biologist takes a small tooth ... one which is of no use to the bear. By cutting the tooth and then counting the lines on the tooth with the help of a microscope, the biologist can tell how old the bear is.

The biologist completes his study on the bear by recording the date, the location where the bear was tagged, and the sex of the bear.

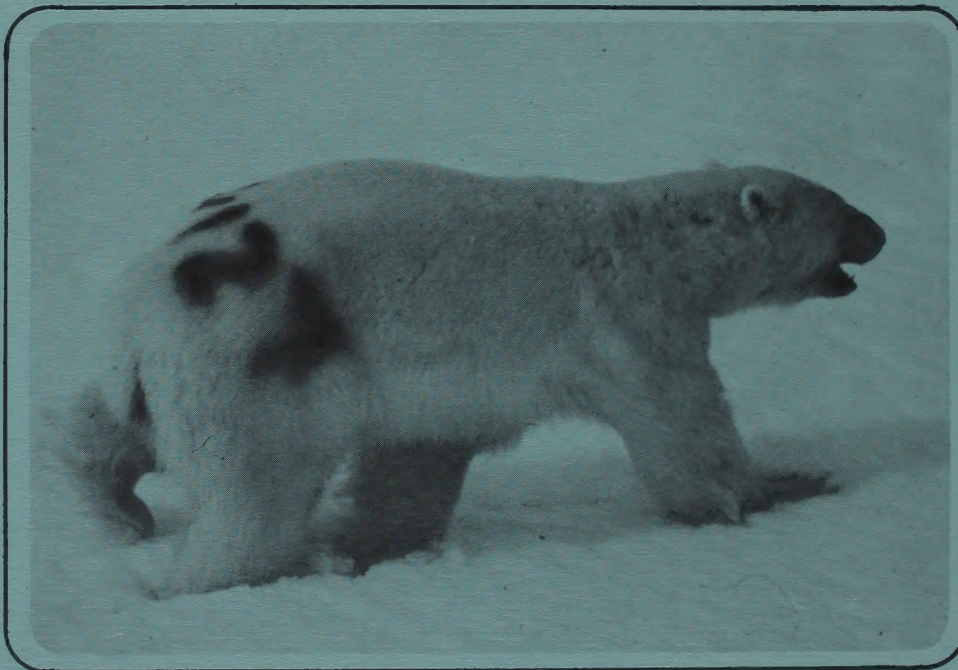


In the research work, why is a number painted on the bear?

Before the biologist leaves the bear he will paint a number on the bear's rump. This number will wear off in a few months or be lost when the bear sheds. While it is still visible, it allows the biologist to follow the movements of the bear without having to recapture him again.

He can read the number from a helicopter and knows how far the bear has travelled from the place where it was caught.

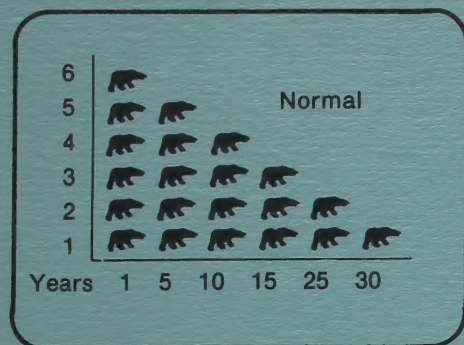
The NWT Fish and Wildlife Service asks hunters not to shoot bears with numbers on them in order to allow scientists to study the animals as long as possible.



Also, the Fish and Wildlife Service asks the people to report the date, and location where you saw a bear with a number on it.

But if a painted bear is shot, the Service will pay the hunter the going rate for a good unmarked hide.

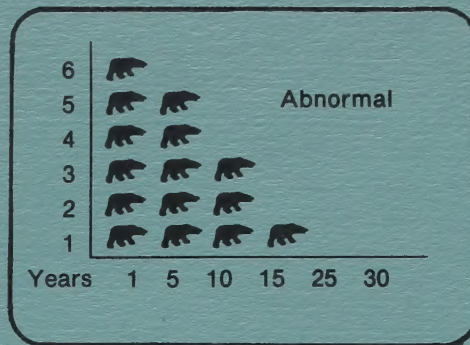
Why does the Fish and Wildlife Service need polar bear jaws from the shot bears?



If you shoot a polar bear you should send the jaw in to the Fish and Wildlife officer and tell him where the bear was shot, what sex it is and the date it was killed.

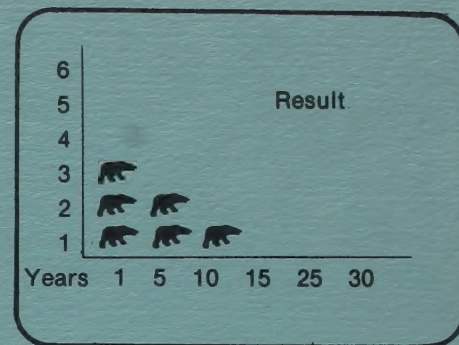
The biologist removes a tooth from the jaw and finds out the bear's age.

If the biologist finds that he



receives teeth from old, middle aged and young bears in one area, he knows that population is normal.

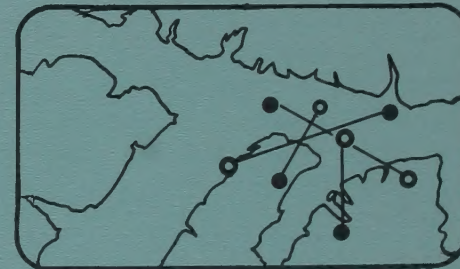
If there are no old bears in an area, just young and middle aged bears, then the biologist knows something is wrong with the population. When there are no older bears, younger bears



and middle aged bears are the ones being hunted.

These bears are also the ones which produce most of the cubs, and if they are overhunted, soon there will be no bears left to reproduce and the population will decline.

What do we learn from tagged bears?



When a biologist puts a tag on a polar bear, he notes the location where he first sighted the bear.

Later, when the bear is shot and the hunter sends in the tag and says where he shot the bear, the biologist can trace the bear's movement.

As the biologist gets more tags, he is able to trace the movements of many bears. With this information about bear's travel

patterns, he is able to identify where different groups of polar bears live. From the capture information he can tell how many bears there are and how many are born each year.

With this information he is able to set quotas for hunters - allowing the killing of many polar bears where there are many bears, and restricting killings where there are few bears.

In this way populations will not be overhunted and there will always be lots of polar bears.

prepared by
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